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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,989	10/15/2001	Masaru Ogata	862.C2412	9562

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EXAMINER

NGUYEN, HUNG

ART UNIT PAPER NUMBER

2851

DATE MAILED: 09/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/975,989

Applicant(s)

OGATA, MASARU

Examiner

Hung Henry V Nguyen

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-- The MAILING DATE of this communication appears on th cover sheet with th correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Abstract

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the following term should be omitted:

"means" line 12. Correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 1, 10, 13, 14, the alternative recitation of "the first gas and/or the second gas" (see line 15 of claim 1, for example) renders the claim indefinite. Since the two conditions are not equivalent, it can not be determined the metes and bounds of the claim.

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4. Claim 1 (for example) recites the limitation "the interior" in line 19. There is insufficient antecedent basis for this limitation in the claim. There are the interior of first vessel, the interior of the second vessel, etc... It is not clearly understood what "interior", the applicant refers to?

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. As best the claimed subject matters are understood (see rejection under 35 U.S.C. 112, second paragraph, *supra*). Claims are anticipated by references.

7. Claims 1, 3, 5-6, 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Miyaji et al (U.S.Pat. 5,559,584).

With respect to claims 1, 3, 5-6 and 10, Miyaji et al discloses an exposure apparatus for exposing a pattern formed on a mask onto a substrate and comprising all structures set forth in the instant claims including: a projection optical system (PL); a first and second vessels for

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providing gas into the illumination system (IL) and projection optical system, a gas supply device and exhausting system and controller for adjusting the pressure inside the first and second vessels (see fig.1 of Miyaji).

8. Claims 1-7, and 10 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Murayama et al (U.S.Pat. 6,341,006).

With regard to claims 1-7 and 10, Murayama et al (fig.1) discloses an exposure apparatus comprising all structures as set forth in the instant claims such as: a projection optical system (12) for projecting a predetermined pattern formed on a reticle onto a substrate, a first vessel for providing first gas into the illumination system and a second vessel gas for providing a second gas into the projection optical system where the first gas and second gas include inert gas (nitrogen, helium) or air, or ozone (see col.10, lines 50 thru col.11, line 2), and gas supply systems (10, 101, 102), a gas replacement section (see fig.1), a main controller (8) for controlling the vacuum pumps for evacuating gas and controlling the interior pressures of the first and second vessels and the flow rate of the gas vessels.

9. Claims 1-7, and 10 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Suenaga et al (U.S.Pat. 6,451,507).

Regarding claims 1-7, and 10, Suenaga et al discloses an exposure apparatus for exposing a pattern formed on mask onto a substrate and comprising all of the limitations of the instant claims including: first and second gas supply devices having an inlet and an outlet (156-205) for supplying first gas and second gas such as ozone or inert gas into the illumination system and projection optical system via first and second vessels (see col.13 line 4 thru col.15, line 7), an exhaust device for replacing and evacuating the first vessel and second vessel, and main

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controller (7) for controlling the pressure in the interior of the first vessel and second vessel and the flow rate of the gas supply devices (see fig.4 of Suenaga; col.18, line 64 thru col.19, line 39).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 8-9, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suenaga et al (U.S.Pat. 6,451,507) or Murayama et al (U.S.Pat. 6,341,006) in view of Umatate et al (U.S.Pat. 5,243,377).

With respect to claims 8-9, and 11-14, Suenaga et al or Murayama et al discloses an exposure apparatus comprising substantially all of the limitations of the instant claims as discussed except for the exposure apparatus being communicated via a computer network such as a LAN or Internet. However, this in itself does not provide any inventive steps. For example, Umatate et al discloses a plural exposure apparatus and a host management system (H-COM), a network interface, a computer and the information relating to each of the exposure apparatuses can be communicated by a computer network (see fig.1 of Umatate et al). In view of such teachings, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Suenaga or Murayama with Umatate to obtain the invention as specified in claims 8-9 and 11-14. It would have been obvious to a skilled artisan to utilize a computer network as taught by Umatate for the exposure apparatus of

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Suenaga et al or Murayama et al for remotely and automatically managing, analyzing, troubleshooting and maintenance the exposure apparatus.

Prior Art Made of Record


12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fuije et al (U.S. Pat. 5,696,623) and Akagawa et al (U.S. Pat. 6,288,769) disclose exposure apparatuses having gas supply devices for supplying inert gas to the light path and have been recited for technical background.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 703-305-6462. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7723 for regular communications and 703-305-7723 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.


Hung Henry V Nguyen
Examiner
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hvn
September 18, 2002